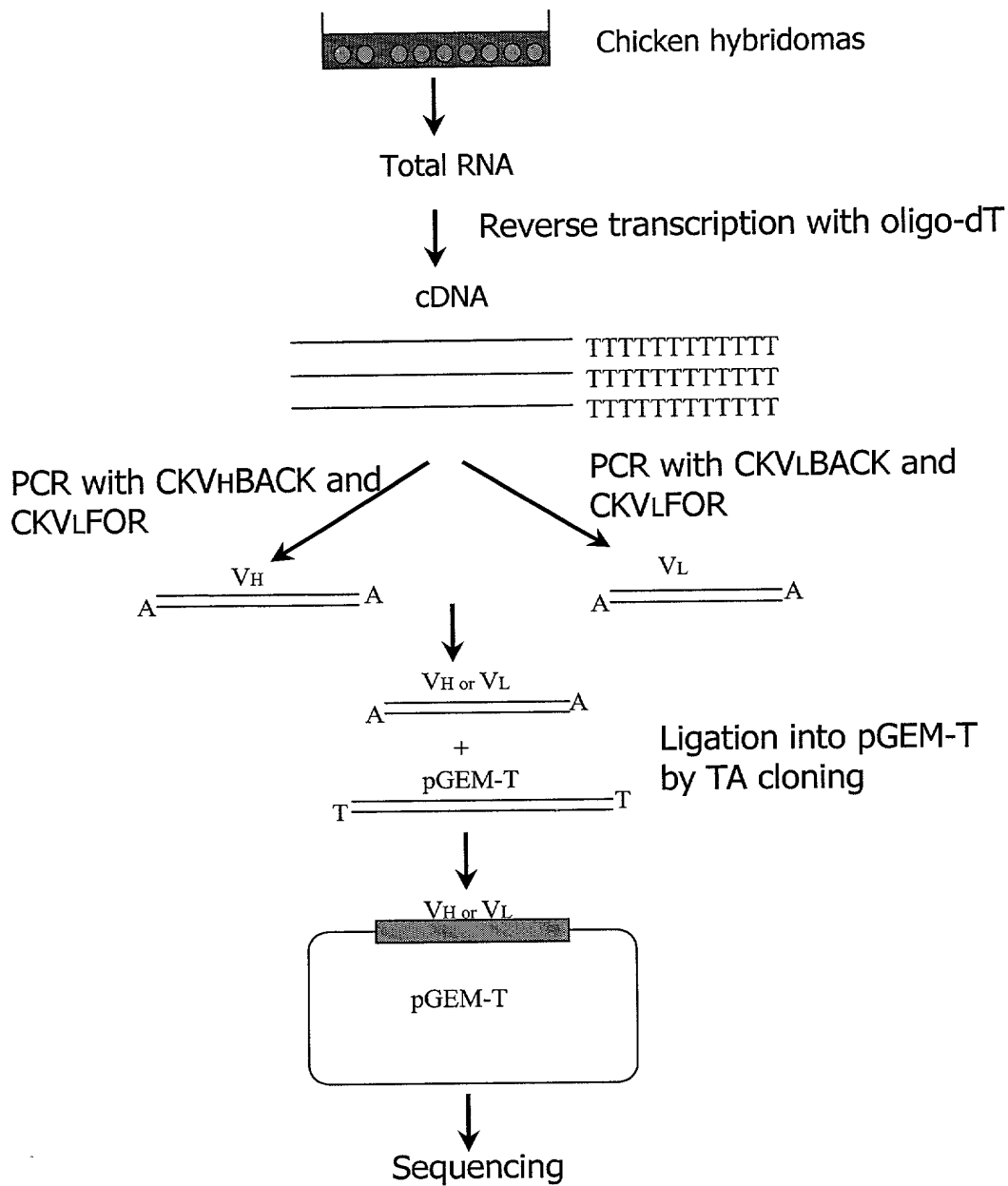


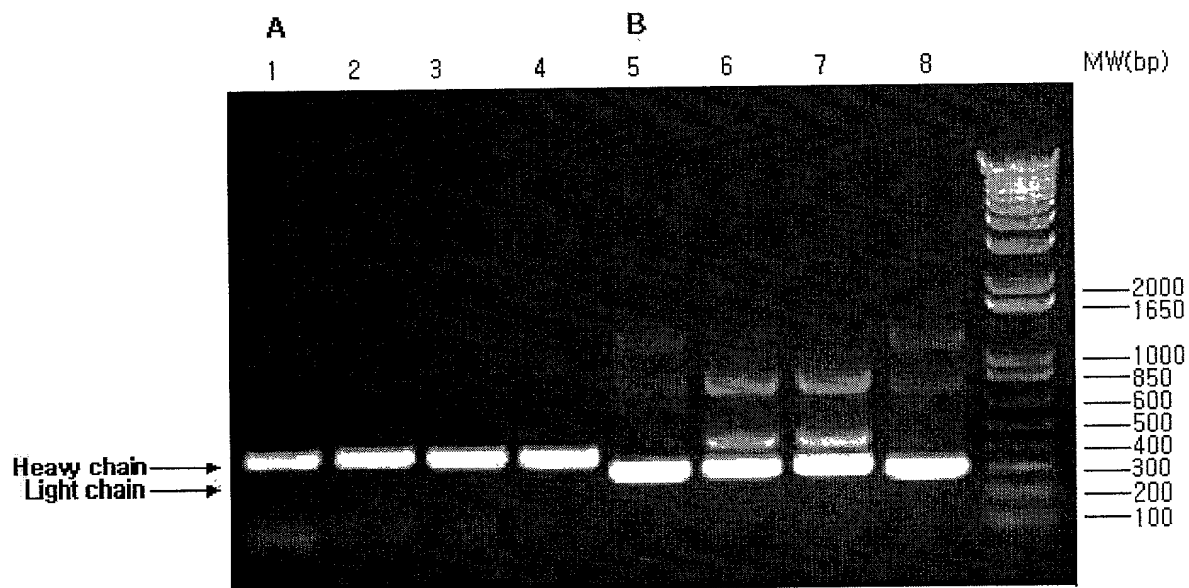
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Fig. 1



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Fig. 2



**Fig. 3a**

GERMLINE	<u>GCCGTGACGTTGGACAGTCCCGGGGCCGCCTCCAGACGCCCGGAAGAGC</u>	50
	CKVHBACK	
2-1HC	. . . . . G.	50
5D11HC	. . . . . G.	50
13C8HC	. . . . . G..G	50
8C3HC	. . . . . G..G	50
GERMLINE	<u>GCTCAGCCTCGTCTGCAAGGCCTCCGGGTCACCTTCAGCAGTTACAACA</u>	100
	CDR1	
2-1HC	. . . . . CC.TGG.	100
5D11HC	. . . . GA.	100
13C8HC	. . . G. C. GA.	100
8C3HC	. . . T. TA. G. G. T.	100
GERMLINE	<u>TGGGTTGGTGCGACAGGCCCCGGCAAAGGGGCTGGAGTTCGTGCTGGT</u>	150
2-1HC	. ATG. A. GG. G.	150
5D11HC	. AT. A. A. G.	150
13C8HC	. A. A. G.	150
8C3HC	. CAC. C. A. T. A. A. A. T. A.	150
GERMLINE	<u>ATTGAC---AACACTGGTAGATACACAGGCTACGGGTCGGCGGTGAAGGG</u>	197
	CDR2	
2-1HC	. AG. --- CT. GTA. C. C.	197
5D11HC	. AGA--- GTGA. TAG. TA. G.	197
13C8HC	. A. AAAA. TGA. T. GG. AA. C. C.	200
8C3HC	. T---GCTGG. G. TAG. TA. G. C.	197
GERMLINE	<u>CCGTGCCACCATCTCGAGGGACAACGGGCAGAGCACAGTGAGGCTGCAGC</u>	247
2-1HC	. TC.	247
5D11HC	A.	250
13C8HC	G.	247
8C3HC	C.	247
	<u>VH1 gene</u>	
GERMLINE	<u>TGAACAACCTCAGGGCTGAGGACACCGGCACCTACTACTGCGCCA<u>AAGCT</u></u>	297
2-1HC	. G.	297
5D11HC	. T. AG.	297
13C8HC	. C. T. GT. A. G. A.	297
8C3HC	. CTG. T.	297
	<u>D segment</u> >< <u>IH gene</u>	
GERMLINE	<u>GCTGGTNNNNNNNNNNNNNNNN-----ACTGCTGGTAGCATCGACGC</u>	341
	CDR3	
2-1HC	. G. C. TATTGTGCTGGT-----TG. G. GA.	335
5D11HC	. T. TA. GGTAGTTGGAGAGGT-----T. A. GA.	338
13C8HC	. T. AA. AGTGGTTACCCT-----GA. C. GA.	338
8C3HC	. T. C. GTGTGGCTATGATTGGTGT-----T. A. A.	341
GERMLINE	<u>ATGGGGCCACGGGACCGAAGTCATCGTCTCTCC</u> >	375
	CKVFHOR	
2-1HC	.	369
5D11HC	.	372
13C8HC	.	372
8C3HC	.	375

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Fig. 3b

GERMLINE	← GCGCTGACTCAGCGTCTCGGTGTCAGCAACCCGGGAGGAACCGTCAA 50
	CKVLBACK
2-1LC	..... A. .... A. .... A. .... 50
5D11LC	..... A. .... T. .... A. .... G. 50
13C8LC	..... A. .... T. .... 50
8C3LC	..... A. .... T. .... A. .... G. 50
GERMLINE	GATCACCTGCTCCGGGATAGCAGCTAC-----TATGGCT 85
	CDR1
2-1LC	..... G. G. .... GCTGGAAGTTACTAT. .... 100
5D11LC	A. .... GC. GTATAGG----- 85
13C8LC	..... GC. TATGG. ----- 85
8C3LC	..... G. A. A. ----- 85
GERMLINE	GGTACCAGCAGAAGGCACCTGGCAGTGCCCTGTCACTGTGATCTATGAC 135
2-1LC	..... C. .... 150
5D11LC	..... T. .... T. .... T. .... 135
13C8LC	..... T. .... T. .... C. .... CTGG 135
8C3LC	..... T. .... AT. .... CT. .... 135
GERMLINE	AACACCAACAGACCCTCGAACATCCCTTCACGATTCTCCGGTTCCAAATC 185
	CDR2
2-1LC	..... CT. .... 200
5D11LC	..... GA. .... G. .... G. .... 185
13C8LC	..... A. .... G. .... G. .... 185
8C3LC	..... A. .... G. .... G. .... C. 185
GERMLINE	CGGCTCCACAGCCACATTAACCATCACTGGGGTCCGAGCCGACGACAATG 235
2-1LC	..... AA. .... A. T. .... G. .... G. G. 250
5D11LC	..... A. .... G. G. .... A. .... G. .... G. G. 235
13C8LC	..... G. .... A. G. .... G. .... G. G. 235
8C3LC	..... AA. .... G. .... G. G. 235
	Vλ 1 gene
GERMLINE	CTGTCTATTACTGTGCGAGTACAGACAGCAGCAGTACT-----GCA-----GGTATA 282
	CDR3
2-1LC	..... G. .... CTTC. .... TTA. GT. ----- 294
5D11LC	..... G. .... A. G. .... A. .... AT. C. TAC-----AT-----CC. .... 282
13C8LC	..... G. .... A. G. .... A. .... TGATAGTGATTATGTT. .... 294
8C3LC	..... T. .... GTGCCTGG. .... A. .... T-----C. .... ATTTAT. TT----- 285
	Jλ gene
GERMLINE	TTTGGGGCCGGGACAACCCTGACCGTCCTA 312
	CKVLFOR
2-1LC	C. .... 324
6D12LC	..... 309
5D11LC	..... 312
13C8LC	..... 324
8C3LC	..... 315

Fig. 3c

[illegible]

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Fig. 3d

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Germline  GCGTGACTCAGCGTCCTCGGTGTACGCAACCCGGGAGGACCGTCAAGATCACCTGCTCCGGGATAGCAGCTACTATGGCTGGTACCGAGCAGAGGCACCTGGCAGTGCCTGTC 105
6D-12-G10 Primer VHB *****A*****T*****AG**TG**AG*****T*****T*****
-----
Germline  ACTGTGATCTATGACACACCAACAGACCCCTCGAACATCCCTTCACGATTCTCGGTTCCAAATCCGGCTCCACAGCCACATTAACCATCATCTGGGGTCCGAGCCGACGACAATGCTGTC 225
6D-12-G10 CDR2 *****T*****G*****G*****G*****A*****G**G*G*****
-----
Germline  ----- VH1 gene----- JH1 gene -----
6D-12-G10 TATTACTGTGCGAGTACAGACGACGACGCTACTGTCAGGTATATTTGGGGCCGGGACACCTGACCCGTCCTAGGT 315
          CDR3 Primer VHF *****TA**T*****:***A*****
          CDR3
```

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Fig. 4a

Germline	AVTLDESGGGLQTPGRALSLVCKASGFTFSSYNMGWVRQAPGKGLEFVAG	50
	CDR1	
2-1HC	.....G.....HG.M....T....W...	50
5D11 HC	.....G.....D....D.I.....Y...	50
8C3 HC	.....GG.....SIGG.I.H....T....Y...	50
13C8 HC	.....GG.....G.LD....A.....	50
Germline	<u>IDNT-GRYTGYGSAVKGRATISRDNGQSTVRLQLNNLRAEDTGTYCAKA</u>	99
	CDR2	
2-1 HC	.S...T..Y.AP.....	98
5D11 HC	.RSD-.SSIY..A.....L.....S	99
8C3 HC	..AG-.GS.Y..A..Q...V.....L.....F...	99
13C8 HC	.KKND.SW.N.AP.....D...I.V.TRD	100
Germline	<u>AGXXX--XX-----XTAGSIDAWGHGTEIVSS</u>	124
	CDR3	
2-1 HC	-GGAY--CA-----GCG.D.....	122
5D11 HC	---SY-----GSWRGST.D.....	123
8C3 HC	SRCGYDWCS-----DN.....	124
13C8 HC	VNSGY-----PD.AD.....	123

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Fig. 4b

Germline	ALTQPSSVSANPGGTVK TCSGDSSY-----YGWYQQKAPGSAPVTVIY	44
	CDR1	
2-1 LC	.....E.....GG..AGSY.....A.....	49
5D11 LC	.....L.E.E.....-GRYR.....SS.....	44
8C3 LC	.....I.E.E.....GNN.-.....S.....	44
13C8 LC	.....L.....G-----SYG...F...S.....P...	44
Germline	DNTNRPSN PSRFSGSKSGSTATLT TGVRADDEAVYYCASTDSSST---	91
	CDR2	CDR3
2-1 LC	.....L....N.....QVE.....G.F...YV---	94
5D11 LC	..DK...D.....D..G.....Q.E.....GNA.NNTY---	91
8C3 LC	Y.NK...D.....P..N.....E.....F.GAWE..PI---	91
13C8 LC	W-NK...D.....E.....GNA..NTADSD	94
Germline	-AGIFGAGTTLTVL	104
2-1 LC	--..L.....	106
5D11 LC	-DP.....	104
8C3 LC	YV.....	105
13C8 LC	YV.....	108

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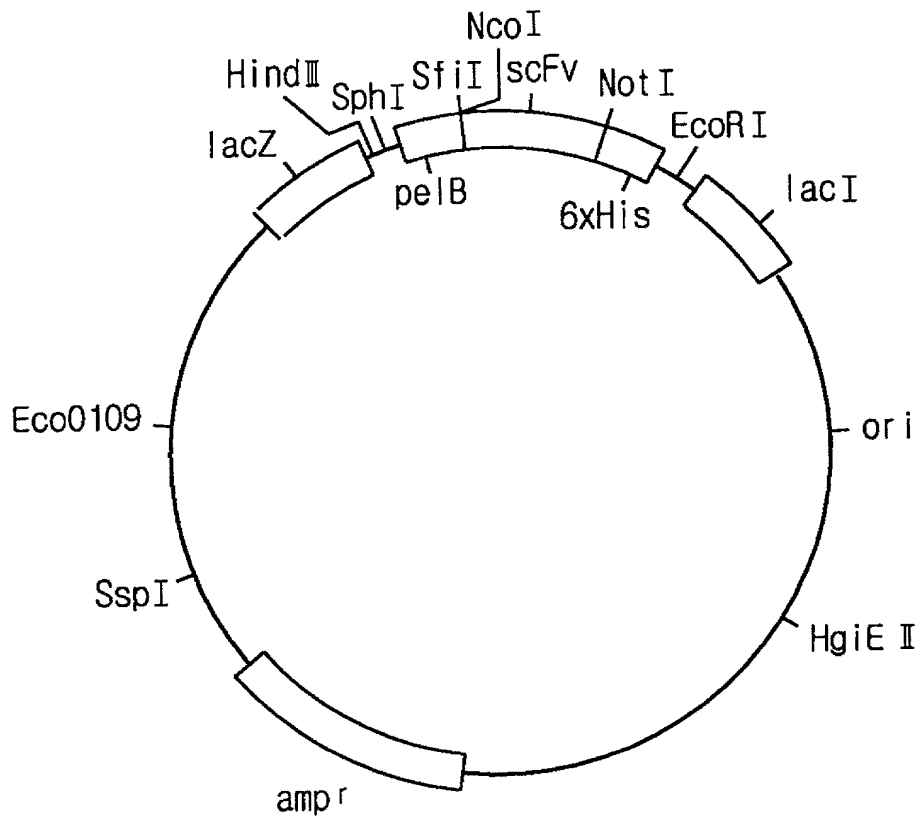
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Fig. 5

Antibody	FR1	CDR1	FR2	CDR2	FR3	CDR3
5D11	ψV4 and ψV2/7/18/23/24	ψV14	ψV7	ψV7	ψV7/12	V12 and V11
8C3	ψV24	ψV23	ψV7	ψV12	ψV7/10/12, ψV2/8/17, and ψV13	ψV13
13C8	ψV4	ψV14	ψV6 and ψV11	ψV14 and ψV12/13	ψV11	ψV12 and ψV20
2-1	ψV4 and ψV5/8/14	ψV8	ψV8	ψV8	ψV8 and ψV14	ψV14 and ψV3

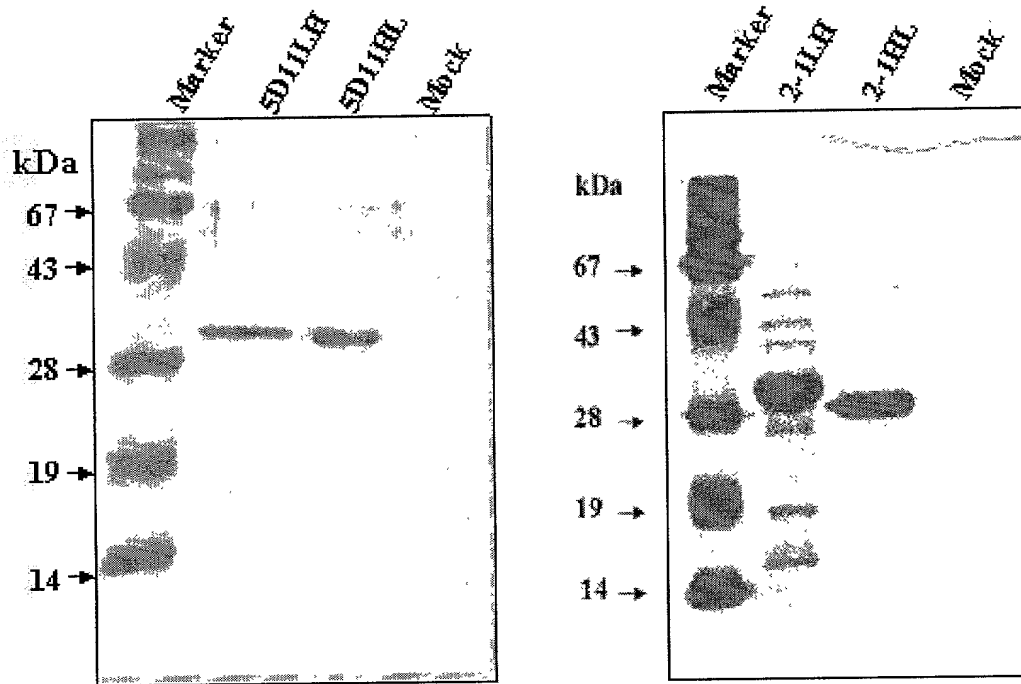
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Fig. 6



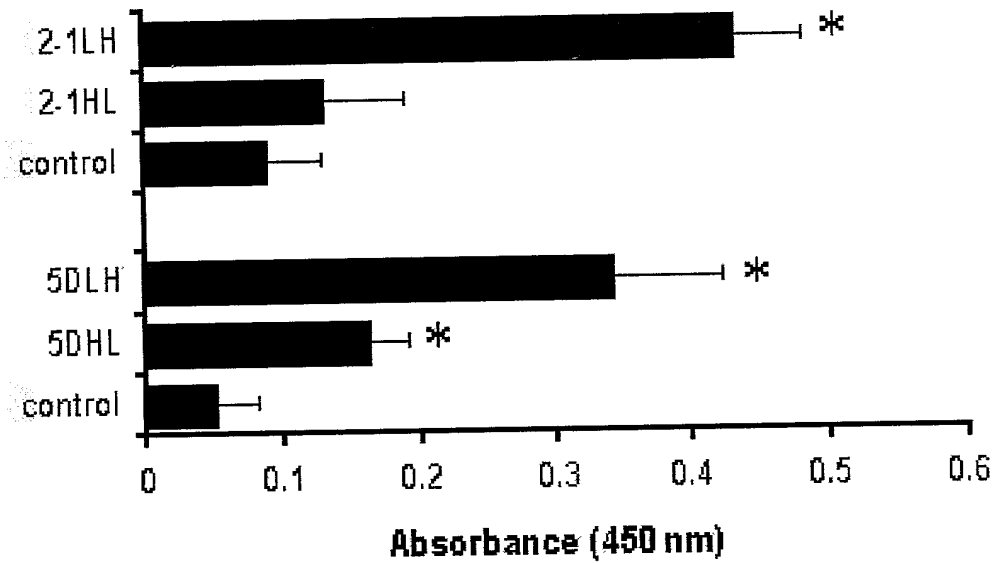
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Fig. 7



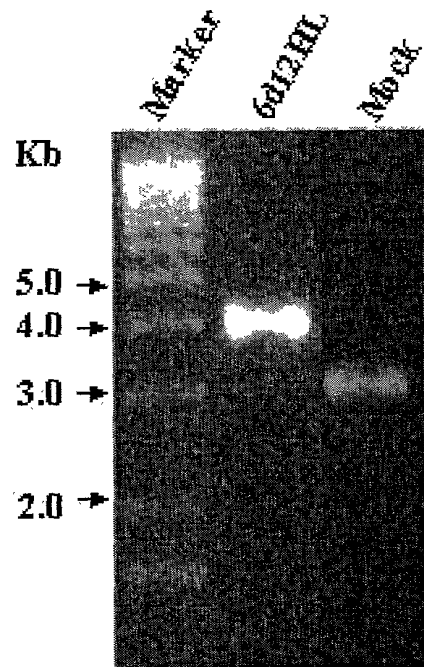
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Fig. 8



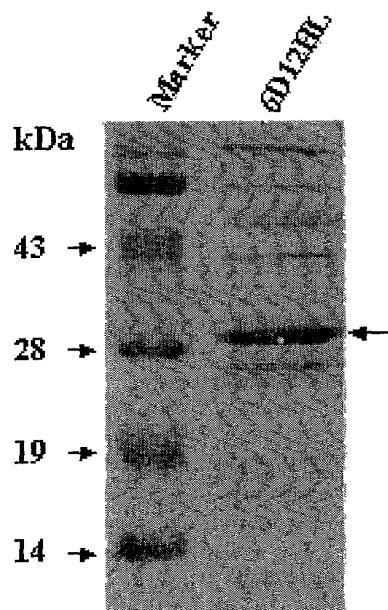
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Fig. 9a



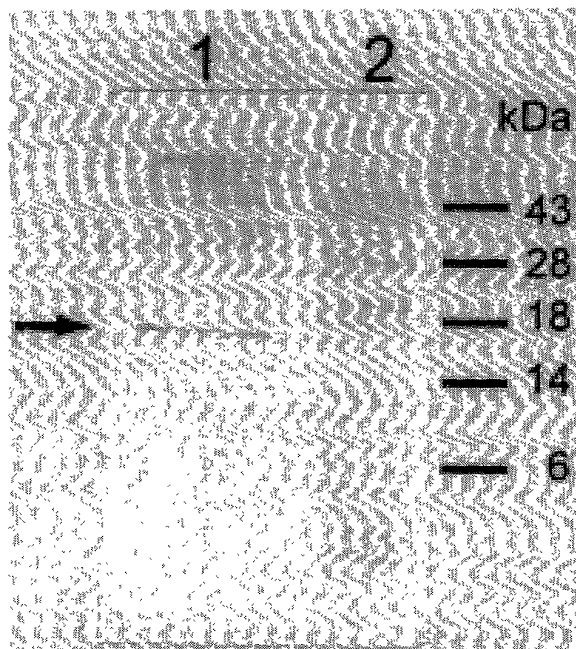
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Fig. 9b



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Fig. 10



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Fig. 11

